

ABSTRACT OF THE DISCLOSURE

**[0050]** A system and method for maximizing channel utilization by efficiently allocating codes and frequencies based on estimated relative interference between subscriber units in a wireless communications network, such as an ad-hoc wireless communications network, in such a way as to minimize multiple access interference. The system and method perform the operations of collecting existing and proposed transmission information between nodes in the network, and calculating a respective interference factor for each existing transmission between certain nodes and each proposed transmission by a transmitting node. The interference factors can be calculated based on, for example, respective distances between certain nodes. The system and method then assign the communications channel configuration, including a frequency channel and code channel, to the transmitting node for communications to other nodes as designated by a minimum of the calculated respective interference factors.